

REMARKS

This application has been carefully reviewed in light of the Office Action dated May 17, 2004. Claims 1 to 9 and 14 to 20 are pending in the application, with Claims 10 to 13 having been cancelled and Claims 14 to 20 having been added. Claims 1, 2 and 4 to 9 have been amended, and Claims 1 and 18 are in independent form. Reconsideration and further examination are respectfully requested.

In the Office Action, Claims 1 and 10 to 13 were rejected under 35 U.S.C. § 102(b) over U.S. Patent No. 5,893,095 (Jain); Claims 1, 3 and 10 to 13 were rejected under 35 U.S.C. § 102(e) over U.S. Patent No. 6,373,979 (Wang); Claim 2 was rejected under 35 U.S.C. § 103(a) over Wang in view of U.S. Patent No. 6,230,154 (Raz); and Claims 3 to 10 were rejected under 35 U.S.C. § 103(a) over Wang and Raz in view of Jain. Claims 10 to 13 have been cancelled without prejudice or disclaimer of subject matter and without conceding the correctness of their rejection. Reconsideration and withdrawal of the rejection of the remaining claims are respectfully requested.

The present invention generally concerns seeking images, from an example image containing at least one region of interest, from amongst a plurality of images stored in a database. Each of the stored images is associated with a data item of a first type, referred to as an index of the stored image, representing at least one characteristic of the visual content of the image. For each region of interest, a data item is received of a second type indicative of a type of taking into account of the content of the region of interest for the seeking of images. A data item is calculated of a third type, referred to as the index of the example image, representing at least one characteristic of the visual content of the example image and depending on the data item of the second type. According to one

feature of the invention, an image research strategy is selected according to at least one data item of the second type.

Referring specifically to the claims, independent Claim 1 as amended is directed to a method of seeking images, from an example image containing at least one region of interest, from amongst a plurality of images stored in a database, each of the stored images being associated with a data item of a first type, referred to as an index of the stored image, representing at least one characteristic of the visual content of the image. The method includes the steps of for each region of interest, receiving a data item of a second type indicative of a type of taking into account of the content of the region of interest for the seeking of images, and calculating a data item of a third type, referred to as the index of the example image, representing at least one characteristic of the visual content of the example image, the method of calculating the data item of the third type depending on the data item of the second type. The method also includes the step of selecting an image research strategy according to the at least one data item of the second type. In addition, the method includes the steps of calculating a similarity, according to the selected image research strategy, between the example image and each of the images amongst at least one subset of the stored images, the similarity being calculated from the data item of the first type associated with the stored image and the data item of the third type associated with the example image, and supplying at least one image, referred to as the result image, in the database, the at least one result image being selected from amongst the stored images in the database according to its degree of similarity with the example image.

Newly added independent Claim 18 is directed to a device for seeking images, from an example image containing at least one region of interest, from amongst a

plurality of images stored in a database, each of the stored images being associated with a data item of a first type, referred to as an index of the stored image, representing at least one characteristic of the visual content of the image. The device includes means for receiving, for each region of interest, a data item of a second type indicative of a type of taking into account of the content of the region of interest for the seeking of images, and means for calculating a data item of a third type, referred to as the index of the example image, representing at least one characteristic of the visual content of the example image and depending on the data item of the second type. The device also includes means for selecting an image research strategy according to the at least one data item of the second type. In addition, the device includes means for calculating a similarity, according to the selected research strategy, between the example image and each of the images amongst at least one subset of the stored images, based on the data item of the first type associated with the stored image and on the data item of the third type associated with the example image, and means for supplying at least one image, referred to as the result image, in the database, based on a selection from amongst the stored images in the database according to a degree of similarity of the result image with the example image.

The applied art is not seen to disclose or to suggest the features of the invention of the subject application. In particular, the Jain, Wang and Raz patents are not seen to disclose or suggest at least the feature of selecting an image research strategy according to the at least one data item of the second type, where the second type takes into account the content of the region of interest for the seeking of images.

As understood by Applicant, Jain discloses content-based searching and retrieval of visual objects, in which a base visual information retrieval (VIR) engine utilizes

a set of universal primitives to operate on the visual objects. The VIR engine allows custom, modular primitives to be defined and registered. A custom primitive addresses domain specific problems and can utilize any image understanding technique. Object attributes can be extracted over the entire image or over only a portion of the object. See Jain, Abstract.

Although Jain teaches that object attributes can be extracted over an entire image or only a portion of the image, Jain is not seen to teach that data items relating to a region of interest affect the type of image research strategy. Accordingly, Jain is not seen to disclose or suggest selecting an image research strategy according to the at least one data item of the second type.

Wang teaches a system and method for determining a level of similarity among more than one image. Anticipated spatial characteristics of an image are used for automatically identifying segments within the image and for identifying weights to be added to the color characteristics associated with the identified segments. To determine similarity, comparisons are made between weighted color characteristics of corresponding segments of different images. See Abstract, Wang; column 4, lines 21 to 28.

Although Wang teaches identifying segments within the image and assigning weights for color characteristics of those segments, Wang is not seen to teach selecting a research strategy in accordance with data items relating to a region of interest in the image. Accordingly, Wang is not seen to disclose or suggest that an image research strategy is selected according to the at least one data item of the second type.

In addition, Raz has been reviewed and is not seen to compensate for the deficiencies of Jain and Wang.

Accordingly, based on the foregoing, independent Claims 1 as amended and newly added independent Claim 18 are believed to be allowable over the applied references.

The other claims in the application are each dependent from the independent claims and are believed to be allowable over the applied references for at least the same reasons. Because each dependent claim is deemed to define an additional aspect of the invention, however, the individual consideration of each on its own merits is respectfully requested.

No other matters being raised, it is believed that the entire application is fully in condition for allowance, and such action is courteously solicited.

Finally, as to a formal matter, the Office Action Summary indicates that priority papers have not been received, despite the Claim to Priority document dated February 2, 2001, with which the priority papers were submitted. Applicant therefore requests that the Examiner acknowledge receipt of these priority papers. If the Examiner does not find these papers in his file, he is requested to contact the undersigned for replacement copies.

Applicant's undersigned attorney may be reached in our Costa Mesa,
California office at (714) 540-8700. All correspondence should continue to be directed to
our below-listed address.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Michael K. O'Neill", is written over a horizontal line.

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